

**BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION**  
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of Part 90 of the	)	WT Docket No. 01-146
Commission's Rules and Policies for	)	RM-9966
Applications and Licensing of Low	)	
Power Operations in the Private	)	
Land Mobile Radio 450-470 MHz	)	
Band	)	

To: The Commission

**REPLY COMMENTS OF THE TORO COMPANY**

The Toro Company ("Toro"), by its attorneys and pursuant to Section 1.415(c) of the Commission's rules, 47 C.F.R. § 1.415(c), hereby submits these reply comments in the above-captioned proceeding.

In this proceeding, the Commission has proposed adopting many of the proposals set forth by the Land Mobile Communications Council ("LMCC"). Toro is pleased with the general level of agreement among the commenters in this proceeding. The overwhelming sentiment is that the Commission should move forward quickly with adopting the LMCC's proposals. Toro urges the Commission to do so, with the modifications to the plan suggested by Toro in its comments and in these reply comments.

To summarize Toro's position, the Commission should:

- Permit mobile units on Group A channels to operate at a maximum power level of 5 watts transmitter output power ("TPO") or 6 watts effective radiated power ("ERP");
- Permit Group B licensees to operate at a maximum power level of 5 watts TPO or 6 watts ERP
- Adopt, without modification, the LMCC's proposal to allow Group A channel fixed/base stations to operate with a maximum power limit of 20 watts ERP with a maximum antenna height of 23 meters above ground level ("AGL");
- Increase the maximum antenna height for fixed operations on Group A and B channels, either to the antenna height levels permitted for central alarm station operations or, in the alternative, to 23 meters AGL;
- Continue to permit, on a secondary basis, non-voice operations on Group A channels and voice operations on Group B channels, to provide maximum flexibility to low power users;

- Decline to adopt duty cycles for low power operations on Group A and B channels, since such a rule would severely limit the useful nature of those channels for numerous users;
- Prohibit continuous operations on Group A and B channels, since such operations are contrary to the public interest goal of shared frequency use;
- Adopt a stringent timeline for the removal of high power users from the designated low power bands;
- Dismiss the attempt by Motorola and others to introduce the issue of Protected Service Areas in this proceeding, since that issue is beyond the scope of this proceeding and should be the subject of a separate proceeding in order to provide an opportunity for the Commission and the public to fully address the issue.

**I. Power and Antenna Height Limits Should Give Users Flexibility to Maximize Use of the Low Power Frequencies.**

*A. Group A Channels.*

In its comments, Toro supported the FCC’s proposal to permit mobile units on Group A channels to operate at 5 watts TPO. The Commission proposed 5 watts TPO as the maximum power level over the LMCC’s proposed 5 watts ERP level. In doing so, the Commission determined that 5 watts ERP power level would be more restrictive than the current 2 watts TPO maximum power level.

Commenters in general supported the Commission’s proposal on this issue. American Water Works Association (“AWWA”) and Toro fully agree with the Commission’s proposal.<sup>1</sup> Dataradio supports a 5 watts TPO limit for Group A frequencies for mobiles for both voice and data.<sup>2</sup> Only the American Petroleum Institute (“API”) disagrees with the Commission’s proposal of the 5 watt TPO maximum.<sup>3</sup>

In its comments, the LMCC revised its proposal and recommended that, for mobile units on Group A frequencies, the Commission should have a maximum limitation of both 5 watts

---

<sup>1</sup> AWWA Comments at 3.

<sup>2</sup> Dataradio Comments at 6. Dataradio also suggests a 5 watts TPO limit for Group B frequencies. Toro supports this proposal, to the extent that it increases the flexible use of Group B channels.

<sup>3</sup> API at 4. API alleges that there has not been a demonstrated need for the use of the slightly higher TPO of 5 watts. To the contrary, however, Toro and other on-campus users have more than adequately demonstrated the need for these slightly higher power levels, in order to overcome man-made and topographic barriers. *See* Toro Comments at 2. For the same reasons, Toro does not support API’s proposal to continue to restrict antenna height levels to a maximum 20 feet AGL. Toro agrees with the Commission’s proposal to increase antenna height levels to 23 meters (75 feet) AGL.

TPO and 6 watts ERP.<sup>4</sup> The LMCC stated that the creation of a dual rule would permit users to decide individually whether they wish to meet the maximum power limitation through the use of higher gain antennas or higher power radios.<sup>5</sup>

To the extent that LMCC's proposal offers low power users increased flexibility without sacrificing higher power limits, Toro is supportive of the LMCC's revised proposal. The key factor is that Toro and other on-campus users require increased power levels to overcome manmade and terrain shielding problems. Whether this is accomplished through higher gain or higher power levels is of less concern to Toro.

*B. Group B Channels.*

In its comments, Toro agreed with the Commission's proposal to maintain a two watt TPO maximum power level for operations on Group B channels.<sup>6</sup> In contrast, the LMCC supports a maximum power increase to 5 watts TPO or 6 watts ERP for Group B operations, similar to the LMCC's proposal for mobile operations on Group A channels.<sup>7</sup> PCIA and UTC concur with LMCC's proposal.<sup>8</sup> In addition, Dataradio suggests in its comments that maximum power levels on Group B channels should be technically equal to Group A channels for voice and data operations.<sup>9</sup>

Toro agrees with the LMCC and other commenters that the Commission should increase maximum power levels to 5 watts TPO and 6 watts ERP for Group B channel operations. A dual rule will provide flexibility to licensees to determine individually the most appropriate method of complying with the maximum power limitation. At the same time, the Commission and other low power users can be assured that maximum power levels support the continued shared use of the low power spectrum.

---

<sup>4</sup> LMCC Comments at 6.

<sup>5</sup> *Id.*

<sup>6</sup> Toro Comments at 4.

<sup>7</sup> LMCC Comments at 8.

<sup>8</sup> PCIA Comments at 4; UTC Comments at 3.

<sup>9</sup> Dataradio Comments at 5.

## **II. Maximum Antenna Height Levels Should Be Increased for Fixed Operations on Both Group A and Group B Channels.**

In its comments, Toro agreed with the Commission's proposal to allow fixed operations on Group A channels to use antennas up to 23 meters (75 feet) in height AGL. Toro also proposed that antenna height limits on Group B channels should be increased to the limits authorized for central alarm station operations. This proposal would allow antennas to be mounted no more than 7 meters (20 feet) above a man-made supporting structure, including antenna structures. *See* 47 C.F.R. § 90.267(a)(7)(ii).

Dataradio supports an increase in maximum antenna height levels. Specifically, Dataradio proposes that, for "base station infrastructure," antenna height levels be equal to those proposed to be permitted on Group A channels – i.e., 23 meters (75 feet) AGL. For "non-infrastructure equipment" used in Group B operations, Dataradio supports the current antenna height limitations.<sup>10</sup>

Dataradio does not define "base station infrastructure" or "non-infrastructure equipment," but Toro is generally supportive of Dataradio's proposal. Toro would support either an increase to the antenna height levels permitted for central alarm stations, or an increase to 23 meters AGL, as proposed by Dataradio. However, Toro would not distinguish between infrastructure equipment and non-infrastructure equipment. Toro believes that such a distinction is unnecessary, would be administratively burdensome, confusing to licensees, and difficult to monitor for compliance. An across-the-board increase to 23 meters AGL would be far easier to implement.

### **III. Non-voice Operations on Group A Channels, and Voice Operations on Group B Channels, Should Continue to Be Permitted on a Secondary Basis.**

#### *A. Non-voice Operations on Group A Channels.*

It appears that all commenters agree that non-voice operations on Group A channels should be permitted on a secondary basis. Dataradio proposes that non-voice operations be permitted on a primary basis.<sup>11</sup> Toro supports the current structure for Group A channels, which authorizes voice operations on a primary basis, and non-voice operations on a secondary basis.

The LMCC opposes “mobile-only data” operations on Group A channels, in order to minimize interference between voice and non-voice systems.<sup>12</sup> Although Toro does not support this proposal, it is Toro’s understanding that such a restriction, if adopted, would not prohibit Toro’s non-voice operations on Group A channels, since Toro’s mobile equipment is not designed for sending data from one mobile handset to another mobile handset. Rather, Toro’s mobile equipment sends data to fixed/base station equipment, which then sends the data to other units operating at fixed locations. Thus, it is Toro’s understanding that if LMCC’s proposal in this regard is adopted, Toro customers’ operations will be unaffected by the “mobile-only data” restriction.

#### *B. Voice Operations on Group B Channels.*

Commenters in general support the continuation of voice operations on a secondary basis on Group B channels. PCIA supports secondary voice operations on Group B channels provided that the voice operations relate to the licensee’s use of the channel for telemetry and/or data.<sup>13</sup> Toro is not opposed to PCIA’s suggested limitation, since any voice operations on Toro equipment are related to any non-voice operations.

---

<sup>10</sup> Dataradio Comments at 9.

<sup>11</sup> Dataradio Comments at 6.

<sup>12</sup> LMCC Comments at 8; *see also* Personal Communications Industry Association (“PCIA”) Comments at 4; United Telecom Council (“UTC”) Comments at 4 (opposing mobile-only data systems on both Group A and Group B channels).

<sup>13</sup> PCIA Comments at 5.

AWWA suggests that Group B channels should be “data only”, unless the Commission proposes a system to ensure a protected service area for data applications.<sup>14</sup> Toro believes that such a restriction on voice operations on Group B channels is unnecessary, since any voice operations would be required to be secondary to non-voice operations. To the extent that a non-voice user experiences interference from a voice user, the voice user is bound by the terms of its license to cease operations upon notice. Such a license restriction should be sufficient to protect against interference to non-voice operations.

#### **IV. While Toro Opposes Duty Cycles, It Also Does Not Support Continuous Data Transmissions.**

Toro stated in its comments that it was opposed to the adoption of duty cycles on Group B channels, because such a rule would prohibit the type of sporadic, intermittent non-voice communications necessary for operating Toro equipment. To this end, Toro stated that the Commission should permit continuous data transmissions in order to accommodate a wide variety of non-voice operations.<sup>15</sup>

Toro wishes to clarify that in opposing duty cycles, it favored the only alternative proposed by the Commission – allowing continuous data transmissions.<sup>16</sup> However, Toro agrees with the Commission that authorizing continuous data transmissions would limit the availability of Group B channels to be used by others. As such, Toro urges the Commission to adopt a rule that provides the flexibility needed by sporadic, intermittent users, but stops short of allowing uses such as continuous data transmissions which would potentially disrupt intermittent data transmissions. The low power channels were designed for shared use among licensees; continuous data transmissions would run counter to the intent of a shared use environment and would severely limit the useful nature of Group B channels for numerous users. Accordingly,

---

<sup>14</sup> AWWA Comments at 1. As discussed below in Part VI, Toro opposes the introduction of the issue of protected service areas in this proceeding.

<sup>15</sup> Toro Comments at 7.

<sup>16</sup> NPRM, para. 19.

Toro hereby clarifies that it opposes continuous operations on Group A and Group B frequencies.

**V. High Power Users on Designated Low Power Channels Should Be Required to Relocate Under a Stringent Timeline.**

Most commenters addressing the issue of high power users agree that high power users must eventually vacate the designated low power channels at some point. Commenters differ with respect to the timing of the relocation. Toro advocates the rapid clearing of all high power users, within eighteen months of the Commission's release of its Report and Order in this proceeding.<sup>17</sup> Other commenters, such as LMCC, PCIA and UTC, recommend that high power users be grandfathered for five years or until the end of their license term, whichever is shorter.<sup>18</sup> API proposes that high power users be relocated as opposed to grandfathered, but does not suggest a timeline for doing so.<sup>19</sup>

Toro continues to believe that high power users pose a threat to the shared use of the designated low power channels among low power users. Accordingly, Toro advocates a stringent timeline for relocating high power users. Eighteen months is not an unreasonable timeline because it will give high power users at least a fiscal year to factor in relocation costs. Furthermore, high power users have been on notice for several years that the frequencies they are using have been designated low power channels. Accordingly, the public interest would be served by a rapid relocation of these high power users.

In the event that the Commission adopts a less stringent timeline, Toro urges the Commission to acknowledge that it will strictly monitor any interference caused by high power users, and that the Enforcement Bureau will vigilantly pursue any high power users causing interference to low power users. In this way, even if high power users remain on low power channels for several more years, low power users can be assured that any interference caused by

---

<sup>17</sup> Toro Comments at 8.

<sup>18</sup> LMCC Comments at 15; PCIA Comments at 7-8; UTC Comments at 4-5.

high power users will cease and that the Commission will take appropriate enforcement measures against high power users causing interference to low power users.

**VI. The Issue of Protected Service Areas Was Not Raised by the Commission in the NPRM and Should Not Be Addressed in this Proceeding.**

Finally, Toro urges the Commission to dismiss the attempts by Motorola and others to introduce the issue of protected service areas (“PSAs”) in this proceeding.<sup>20</sup> That issue was not addressed by the Commission in the NPRM, and it is not appropriate to introduce it now.

Rather, whether the Commission should adopt PSAs should be the subject of a separate proposed rulemaking, so that parties are given a complete background with respect to the issue of PSAs, and the Commission has had an opportunity to address the merits of adopting such a proposal. PSAs represent one of several ways in which the Commission can enhance spectrum-efficient use of the designated low power channels. If the Commission is interested in exploring PSAs or other options, it should do so in a separate proceeding in which all of the options may be considered on their merits.

---

<sup>19</sup> API Comments at 11.

<sup>20</sup> *See, e.g.*, Motorola Comments at 3.



## **VII. Conclusion.**

For the reasons set forth above and in Toro's comments filed in this proceeding, Toro supports the adoption of the LMCC proposal, with the modifications suggested by Toro. In addition, Toro strongly opposes any proposal to prohibit non-voice operations on Group A frequencies or voice operations on Group B frequencies. Finally, Toro opposes consideration at this time of the proposed introduction of the issue of PSAs in this proceeding.

Respectfully submitted,

THE TORO COMPANY

/s/ David A. O'Connor  
George Y. Wheeler  
David A. O'Connor

HOLLAND & KNIGHT LLP  
2099 Pennsylvania Ave., N.W.  
Suite 100  
Washington, D.C. 20006  
Tel: (202) 955-3000

Its Attorneys

Dated: November 13, 2001

CERTIFICATE OF SERVICE

I, Laura Ledet, an employee of Holland & Knight LLP, hereby certify that on November 13, 2001, a copy of the foregoing Reply Comments of the Toro Company was served by first class U.S. mail, postage prepaid to the following:

Henry A. Solomon, Esq.  
Garvey, Schubert & Barer  
Fifth Floor  
1000 Potomac Street, N.W.  
Washington, D.C. 20007

Raul R. Rodriguez  
Philip A. Bonomo  
Leventhal, Senter & Lerman P.L.L.C.  
2000 K Street, N.W., Ste 600  
Washington, D.C. 20006

Thomas J. Keller  
John M.R. Kneuer  
Verner, Liipfert, Bernhard, et al  
901 15<sup>th</sup> Street, N.W., Ste 700  
Washington, D.C. 20001

Louis P. Warchot  
Dennis J. Starks  
Association of American Railroads  
50 F Street, N.W.  
Washington, D.C. 20005

Alan S. Tilles, Esq.  
Jason Kerben, Esq.  
Shulman, Rogers, Gandal Pordy & Ecker PA  
11921 Rockville Pike, 3<sup>rd</sup> Floor  
Rockville, MD 20852

Laura L. Smith  
Jeremy Denton  
Industrial Telecommunications Assoc, Inc.  
1110 N. Glebe Road, Ste 500  
Arlington, VA 22201

Terry G. Mahn  
Robert J. Ungar  
Fish & Richardson P.C.  
601 13<sup>th</sup> Street, N.W.  
Washington, D.C. 20005

Jonathan L. Weil, Esq.  
Philips Medical Systems  
300 Minuteman Road  
Andover, MA 01810

Jill M. Lyon  
United Telecom Council  
1901 Pennsylvania Avenue, NW, 5<sup>th</sup> Fl  
Washington, DC 20006

Thomas W. Curtis  
American Water Works Association  
1401 New York Avenue, NW Ste 640  
Washington, DC 20005

Wayne V. Black  
Katherine C. Lucas  
Keller and Heckman LLP  
1001 G Street, NW, Ste 500 West  
Washington, D.C. 20001

John F. Lyons  
Motorola, Inc.  
1350 I Street, NW  
Washington, D.C. 20005

Larry Sears  
Hexagram, Inc.  
23905 Mercantile  
Cleveland, OH 44122

Robert M. Gurss, Esq.  
Land Mobile Communications Council  
1110 North Glebe Road, Ste 500  
Arlington, VA 22201-5720

Peter A. Tenhula, Esq.\*  
Office of Chairman Michael K. Powell  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW, 8-B201  
Washington, DC 20554

Monica Sha Desai, Esq.\*  
Office of Commissioner Martin  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW, 8-C302  
Washington, DC 20554

Paul Margie\*  
Office of Commissioner Copps  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW, 8-A302  
Washington, DC 20554

Bryan Tramont, Esq.\*  
Office of Commissioner Abernathy  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW, 8-A204  
Washington, DC 20554

Thomas J. Sugrue, Esq.\*  
Chief, Wireless Telecommunications Bureau  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW, 3-C252  
Washington, DC 20554

Kathleen Ham, Esq.\*  
Deputy Chief, Wireless Telecom Bureau  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW, 3-C255  
Washington, D.C. 20554

D'wana R. Terry, Esq.\*  
Chief, Public Safety & Private Wireless Div  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW, 4-C321  
Washington, DC 20554

Ramona E. Melson, Esq.\*  
Public Safety & Private Wireless Division  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW, 4-C237  
Washington, DC 20554

Mr. Herbert W. Zeiler\*  
Public Safety & Private Wireless Division  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW, 4-C343  
Washington, DC 20554

Scot Stone\*  
Public Safety & Private Wireless Division  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW, 4-B408  
Washington, DC 20554

Magalie R. Salas\*  
Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW, TW-A325  
Washington, DC 20554

Chairman Michael Powell\*  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW, 8-B201  
Washington, DC 20554

Commissioner Kathleen Q. Abernathy\*  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW, 8-A204  
Washington, DC 20554

Commissioner Michael J. Copps\*  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW, 8-A302  
Washington, DC 20554

Commissioner Kevin J. Martin\*  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW, 8-C302  
Washington, DC 20554

John Schauble\*  
Chief, Policy & Rules Branch  
Public Safety & Private Wireless Division  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW, 3-A334  
Washington, DC 20554

Guy Benson\*  
Policy & Rules Branch  
Public Safety and Private Wireless Division  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW, 3-A334  
Washington, DC 20554

Lacy L. Thomas  
Director, Cook County Hospital  
1835 West Harrison Street  
Chicago, IL 60612

Michael J. Phelps  
Dave Herrmann  
Allina Health System  
5601 Smetana Drive  
Minnetonka, MN 55343

Bette N. Rinehart  
Motorola, Inc.  
1270 Fairfield Road, Ste 5  
Gettysburg, PA 17325

---

Laura E. Ledet

\*Via Hand Delivery